

APPARATUS FOR COLLECTING TELEVISION CHANNEL DATA AND MARKET RESEARCH DATA

BACKGROUND OF THE INVENTION

This invention relates to an apparatus for collecting and storing channel data of television receivers being viewed in a plurality of panelist's homes and market research data, and transmitting the collected data to a data center in given time periods for use in a system for collecting and processing the channel data and market research data at the data center.

Television audience ratings for television broadcasting have been measured by providing in each panelist's home a channel detector for detecting a television channel of a television receiver being viewed and a device for storing data supplied from the channel detector, and by collecting every day the stored channel data in response to a polling from a data center in which the channel data is analyzed by a computer to derive the television audience ratings. The applicants have proposed such an apparatus for measuring the television audience ratings in Japanese Patent Publication Kokai 54-80617. The applicants have also disclosed, in Japanese Patent Publication Kokai 54-80610, a data transmission system utilizing domestic power supply lines, and also proposed, in Japanese Patent Publication Kokai 54-10167, an apparatus in which terminals provided in panelist's homes for searching the television audience ratings are commonly used with subscriber's telephone sets.

Heretofore, market research data has been generally collected by a method which utilizes research booklets or questionnaires, and a method in which research data is picked-up electronically. The former method using the booklets has the merit that the object and range of a survey can be selected and changed at will, but also has demerits in that the delivery and collection of booklets require a lot of time and labor and in that error might be introduced in collecting data written on the booklets. In the market research data collection system in which data is picked-up with the aid of electric means, a market research data input device is provided in a panelist's home and data is entered therein by means of a bar-code reader and a keyboard, and then the data is sent to the data center via telephone type links and the data is analyzed by a computer. Heretofore, the measurement of television audience ratings and the market research were often effected separately from each other. In such a case, it is necessary to provide the system for measuring the television audience ratings and the system for performing the market research separately from each other, so that the cost might be high and an effective survey could not be performed.

In order to decrease data input error upon entering the market research data, there has been proposed a system in which simple messages are displayed on a display unit and the data is entered in a given order in an interactive manner.

There has recently been a demand to increase the scope and content of audience rating and market research. Research results such as audience ratings for respective home compositions, sexes and ages, evaluation for programs and reaction to commercials have been required. In order to satisfy such a requirement, a method of measuring audience ratings for respective persons with the aid of push buttons was experimentally

effected. In this method, an operation device with a ten-key keypad was connected to the television channel detector via a cable and codes allocated to respective persons were entered with the keys at the start and end of periods of television watching, and personal evaluations were also entered. In this method, since the persons were identified by numbers the persons were liable to forget the identification code. Further, the use of the cable makes the method impracticable. Additionally, a device for transmitting the data from a data transmitter with a keyboard to a data receiver, with the aid of infrared light has been developed, in said device a total number of persons who are watching the television is entered using the device. But this system does not aim at the entering of data for identifying respective persons.

In the case of entering market research data in a predetermined order, i.e. in a sequence-ordered-system, it is necessary not to disturb the given order, while taking care of research items which have been entered, so that when the number of entering operations is large, the operator might become tired. In a data entering system in the interactive mode, although the mis-entering can be reduced, the entering time might be unnecessarily prolonged, particularly for persons who are skilled in this method, so that the efficiency of the data input operation is decreased. Moreover, since the same steps are repeated, the person might feel bored, and fail to enter the data correctly.

There have been further proposals for electrically effecting television audience ratings and acquiring market research data, in addition to those disclosed in the above mentioned three publications. U.S. Re. U.S. Pat. No. 31,951, "MARKET SURVEY DATA COLLECTION METHOD," discloses a market research data collecting apparatus in which data is entered in an interactive manner to reduce possible mis-operation and the data transmission to the data center is effected when a main memory has stored the data up to its capacity. An electronic audience rating and market research apparatus has been described in U.S. Pat. Nos. 4,566,030, "TELEVISION VIEWER DATA COLLECTION SYSTEM," and U.S. Pat. No. 4,546,382, "TELEVISION AND MARKET RESEARCH DATA COLLECTION SYSTEM AND METHOD." In both the methods, the market research is effected by substitution programs, a channel lock function is adopted for multiple use, and the data transmission to the data center is carried out at a predetermined time. Further, U.S. Pat. No. 4,630,108, "PROGRAMMED OVER-THE-AIR MARKETING RESEARCH SYSTEM," describes a market research apparatus utilizing cables and links with ordinary wireless communication, microwave transmission and satellite and substitution programs. Further, U.S. Pat. No. 4,644,393, "MEANS FOR MONITORING PEOPLE WHO ARE WATCHING A TELEVISION SET," discloses an apparatus for collecting television audience rating data, in which the total number of people watching the television is transmitted via infrared light or ultrasonic sound to a receiver with the aid of a key pad and is displayed on a monitor, and then is stored in a memory.

In the above mentioned apparatus for conducted television audience rating surveys and/or market research, the survey data does not include personal information of respective panelists, so that it is difficult to obtain useful data which meets the variety of needs of modern audience rating surveys and purchasers.